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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/533,159	<b>Applicant(s)</b> YAMAMOTO ET AL.	
	<b>Examiner</b> Rip A. Lee	<b>Art Unit</b> 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☒ Claim(s) 2, 4, 5 and 13-18 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |  |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>04-29-2005</u> . | 6) <input type="checkbox"/> Other: ____  |

Art Unit: 1796

## **DETAILED ACTION**

### ***Priority***

1. The foreign priority claim filed on October 29, 2002 was not entered because the foreign priority claim was not filed during the time period set forth in 37 CFR 1.55(a)(1). For original applications filed under 35 U.S.C. 111(a) (other than a design application) on or after November 29, 2000, the time period is during the pendency of the application and within the later of four months from the actual filing date of the application or sixteen months from the filing date of the prior foreign application. For applications that have entered national stage from an international application filed on or after November 29, 2000, after compliance with 35 U.S.C. 371, the claim for priority must be made during the pendency of the application and within the time limit set forth in the PCT and the Regulations under the PCT. See 37 CFR 1.55(a)(1)(ii). If applicant desires priority under 35 U.S.C. 119(a)-(d), (f) or 365(a) based upon a prior foreign application, applicant must file a petition for an unintentionally delayed priority claim (37 CFR 1.55(c)). The petition must be accompanied by (1) the claim (i.e., the claim required by 35 U.S.C. 119(a)-(d) and (f) and 37 CFR 1.55) for priority to the prior foreign application, unless previously submitted; (2) a surcharge under 37 CFR 1.17(t); and (3) a statement that the entire delay between the date the claim was due under 37 CFR 1.55(a)(1) and the date the claim was filed was unintentional. The Director may require additional information where there is a question whether the delay was unintentional. The petition should be addressed to: Mail Stop Petition, Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

Art Unit: 1796

**MPEP § 1893.01(a)(1) [R-5] Submissions Required by 30 Months from the Priority Date**

To begin entry into the national stage, applicant is required to comply with 37 CFR 1.495(b) within 30 months from the priority date. Thus, applicant must pay the basic national fee on or before 30 months from the priority date and be sure that a copy of the international application has been received by the U.S. Designated or Elected Office prior to expiration of 30 months from the priority date. Where the international application was filed with the United States Receiving Office as the competent receiving Office, the copy of the international application referred to in 37 CFR 1.495(b) is not required.

Facsimile transmission is not acceptable for submission of the basic national fee and/or the copy of the international application. See 37 CFR 1.6(d). Likewise, the certificate of mailing procedures of 37 CFR 1.8 do not apply to the filing of the copy of the international application and payment of the basic national fee. See 37 CFR 1.8(a)(2)(i)(F). Applicants may file these items using the Express Mail mailing procedures set forth in 37 CFR 1.10. In addition, applicants may now file national stage submissions online using the EFS-Web system. Further information regarding EFS-Web is available at [http://www.uspto.gov/ebc/efs\\_help.html](http://www.uspto.gov/ebc/efs_help.html)

Applicants cannot pay the basic national fee with a surcharge after the 30 month deadline.

Failure to pay the basic national fee within 30 months from the priority date will result in abandonment of the application. The time for payment of the basic fee is not extendable.

Similarly, the copy of the international application required under 37 CFR 1.495(b) must be provided within 30 months from the priority date to avoid abandonment. A copy of the international application is provided to the U.S. Designated or Elected Office by the International Bureau (the copy is ordinarily communicated to the Office on the day of publication of the international application at about 18 months from the priority date).

The International Bureau also mails a confirmation (Form PCT/IB/308) to applicant upon which applicant can rely that the copy has been provided. This confirmation constitutes conclusive evidence of transmission of the international application. See PCT Rule 47.1(c).

If the basic national fee has been paid and the copy of the international application (if required) has been received by expiration of 30 months from the priority date, but the required oath or declaration, translation, search fee (37 CFR 1.492(b)), examination fee (37 CFR 1.492(c)), or application size fee (37 CFR 1.492(j)) has not been filed prior to commencement of the national stage (see MPEP § 1893.01), the Office will send applicant a notice identifying any deficiency and provide a period of time to correct the deficiency as set forth in 37 CFR 1.495(c). The time period usually set is 2 months from the date of the notification by the Office or 32 months from the priority date, whichever is later. This period may be extended for up to 5 additional months pursuant to the provisions of 37 CFR 1.136(a). Failure to timely file the proper reply to the notification will result in abandonment of the national stage application. The processing fee set forth in 37 CFR 1.492(i) will be required for acceptance of an English translation of the international application later than the expiration of thirty months after the priority date, and the surcharge fee set forth in 37 CFR 1.492(h) will be required for acceptance of any of the search fee, examination fee, or oath or declaration of the inventor after the date of commencement. 37 CFR 1.495(c)(3).

Art Unit: 1796

### *Double Patenting*

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claims 1-6 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-6 of U.S. Patent No. 7,041,726. Although the conflicting claims are not identical, they are not patentably distinct from each other because both sets of claims are drawn to substantially the same composition comprising polyolefin, polyamide fiber, silica, and silane coupling agent.

4. Claims 1-6 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-8 of copending Application No. 10/532,995. Although the conflicting claims are not identical, they are not patentably distinct from each other because both sets of claims are drawn to substantially the same composition comprising polyolefin, polyamide fiber, silica, and silane coupling agent.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Art Unit: 1796

***Claim Objections***

5. Claim 2 is objected to because of the following informalities: It is not clear what is meant by the phrase, "polyamide fibers are comprised of silica particles." Appropriate correction is required.

6. Claims 4, 5, and 13-18 are objected to because of the following informalities: Please rewrite ratios "5:5" and "8:2" as "1:1" and "4:1," respectively. Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 4, 13, and 17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. There is insufficient antecedent basis for the term "the polyamide ultrafine fibers-dispersed polyolefin resin composition" in the claims.

9. Claims 7-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 7-9 recite a process in which the process step(s) involve "preparing" a resin or "preparing" silica particles. It is not clear what step or action is to be taken in "preparing" the claimed materials. Without qualification, the exact process, and consequently, the subject matter of the claims is vague and indefinite. Dependent claims 10-18 are subsumed under the rejection.

Art Unit: 1796

***Claim Rejections - 35 USC § 102***

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

***Claim Rejections - 35 USC § 103***

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

13. Claims 1-5, 8, 9, 11, 12, and 15-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Segal (U.S. 4,207,373).

Segal teaches a composition comprising 25-80 wt % of polyolefin, 10-60 wt % of filler (silica), 10-45 wt % of fibrous reinforcement, and silane coupling agent (claims 1, 4, and 8). Fibrous reinforcement includes polyamide fiber (col. 4, line 31).

Art Unit: 1796

14. Claims 7, 10, 13, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Segal.

The discussion of the disclosures of the prior art from the previous paragraph of this office action is incorporated here by reference. Segal does not disclose the particular order of combining elements as recited in the instant claims, however, one having ordinary skill in the art, in absence of any showing of criticality or unexpected results, would have found it obvious to vary the order of addition of four components and thereby carry out the process of the instant claims. It is well settled that the selection of any order of performing process steps is *prima facie* obvious in absence of new or unexpected results. *In re Gibson*, 39 F.2d 975, 5 USPQ 230 (CCPA, 1930).

15. Claims 7, 10, 13, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Segal in view of Cordova *et al.* (U.S. 4,748,197).

Segal does not disclose the particular order of combining elements as recited in the instant claims. The prior art of Cordova *et al.* teaches preparation of nylon, glass, and PET fibers by treatment with organosilane coupling agent (claim 5). Fibers treated in this manner are readily dispersed into thermoplastic matrices such as polyolefin (col. 3, line 61-65). It would have been obvious to one having ordinary skill in the art to combine polyolefin with organosilane treated fiber, as disclosed in Cordova *et al.* in order to achieve homogeneous dispersion of the fiber in compositions of Segal. Absent any showing of criticality or unexpected results, and in light of the fact that the selection of any order of performing process steps is a matter of routine experimentation, and therefore, obvious to one having ordinary skill in the art, it is maintained that the person of ordinary skill in the art would have found it obvious to carry out the process of the instant claims by combining polyolefin and organosilane treated polyamide fiber, followed by mixing with filler.



Art Unit: 1796

16. Claims 1-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Yamamoto *et al.* (JP 11-106570).

Yamamoto *et al.* teaches a composition comprising 40-90 parts by weight (pw) of polyolefin, 10-60 pw of polyamide fiber, and silane coupling agent. Fibers have a diameter of less than 1  $\mu\text{m}$  and an aspect ratio of 20-1000 (abstract). Compositions contain filler such as white carbon (silica); paragraph [0025]. Variations of combining components are disclosed in paragraph [0018].

17. Claims 7-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto *et al.*

The discussion of the disclosures of the prior art of Yamamoto *et al.* from the previous paragraph of this office action is incorporated here by reference. The reference does not show examples in which compositions are combined with silica filler, however, one having ordinary skill in the art, in absence of any showing of criticality or unexpected results, would have found it obvious to vary the order of addition of four components and thereby carry out the process of the instant claims. It is well settled that the selection of any order of performing process steps is *prima facie* obvious in absence of new or unexpected results. *In re Gibson*, 39 F.2d 975, 5 USPQ 230 (CCPA, 1930).

18. Claims 1-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Yamamoto *et al.*; WO 2004/039881 (published May 3, 2004) and JP 2004-149635 (published May 27, 2004).

The prior art teaches substantially the same invention as that recited in the instant claims.

19. Claims 1-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Yagi *et al.* (EP 1 416 013).

The prior art teaches substantially the same invention as that recited in the instant claims.

Art Unit: 1796

20. Claims 1, 6, and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Amino *et al.* (U.S. 6,058,994) in view of Tierney (U.S. 3,328,339).

Amino *et al.* discloses a composition comprising nylon 6 fiber, polyethylene, and rubber (provided as UBESHP-HA1060 masterbatch) and silica (example 13). Fibers have a lower limit of average diameter at 0.1  $\mu\text{m}$  and an aspect ration of 10-1000 (col. 4, lines 62-67). The reference does not disclose use of coupling agent. However, at the time the invention was made, use of an organosilane coupling agent for compounding silica was well-established in the art. Tierney teaches that silica treated with organosilane coupling agent is readily prepared and silica treated in this manner is highly dispersible in non-polar polymer resin. It would have been obvious to one having ordinary skill in the art to modify the composition of Amino *et al.* by incorporating an organosilane coupling agent in order to improve the dispersibility of silica filler as well as to enhance adhesion to the polymer resin. Motivation to modify the reference arises from the expectation of enhanced mechanical properties of the final product.

Art Unit: 1796

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rip A. Lee whose telephone number is (571)272-1104. The examiner can be reached on Monday through Friday from 9:00 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu S. Jagannathan, can be reached at (571)272-1119. The fax phone number for the organization where this application or proceeding is assigned is (571)273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <<http://pair-direct.uspto.gov>>. Should you have questions on the access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll free).

A handwritten signature in black ink, appearing to read 'Rip A. Lee', with a long horizontal stroke extending to the right.

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December 17, 2007